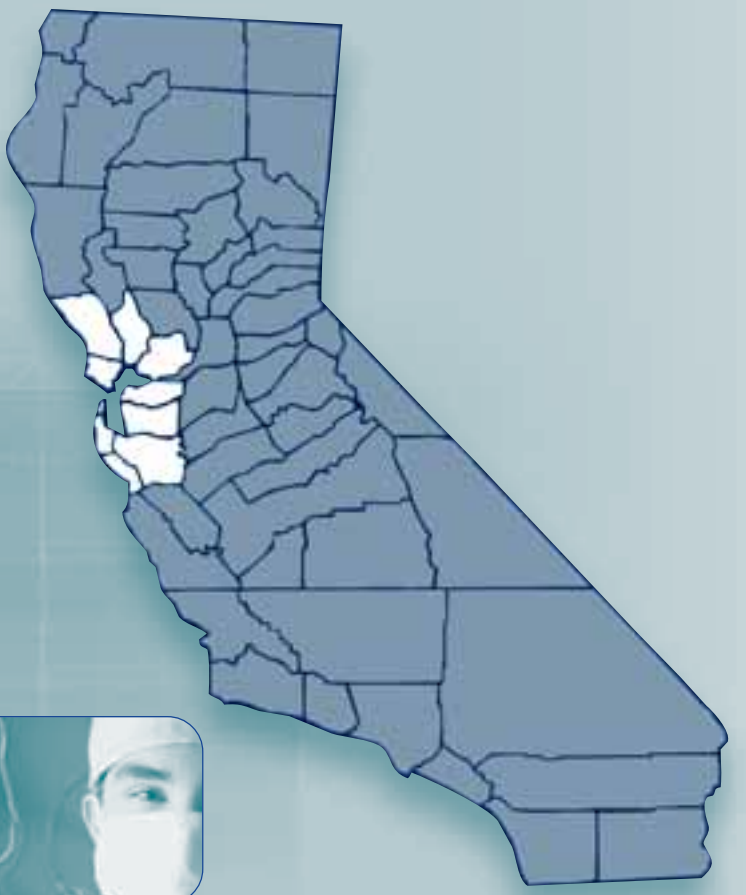
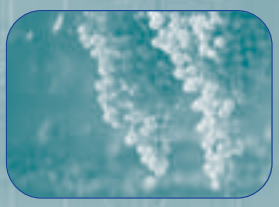
California Regional Economies Project

Bay Area Economic Base Report





Bay Area
Economic Base Report

A Product of the
California Regional Economies Project
2004

Prepared by
Center for Continuing Study of the California Economy

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The Twin Challenges of Economic Growth and Workforce Investment

The California Regional Economies Project responds to two separate sets of regional priorities. Many regional organizations are focused on efforts to promote long-term economic growth that is broadly shared among each region's residents. The project's economic base analyses will help to identify sectors that have the potential for high-wage job growth such as, for example, biotech.

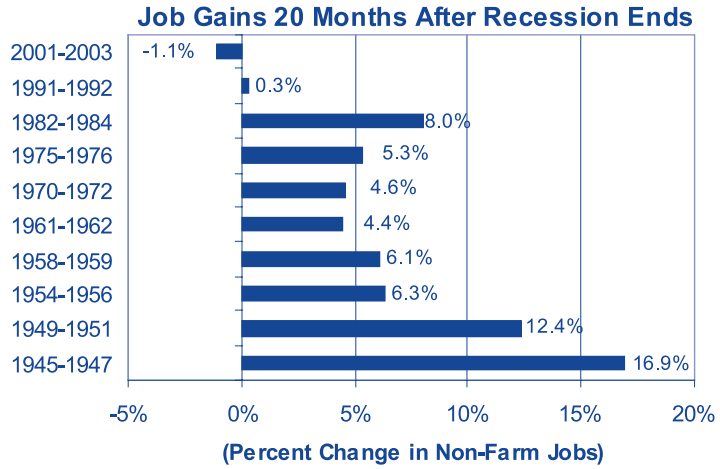
The Project will select specific clusters for deeper analysis. One aspect of the cluster analyses is to identify workforce policies that will support cluster growth.

Workforce boards play a role in promoting economic growth but they also have mandates to help residents train for and find jobs when they are unemployed. Workforce boards are moving beyond the traditional job-finding role to develop programs focused on career paths and upward mobility.

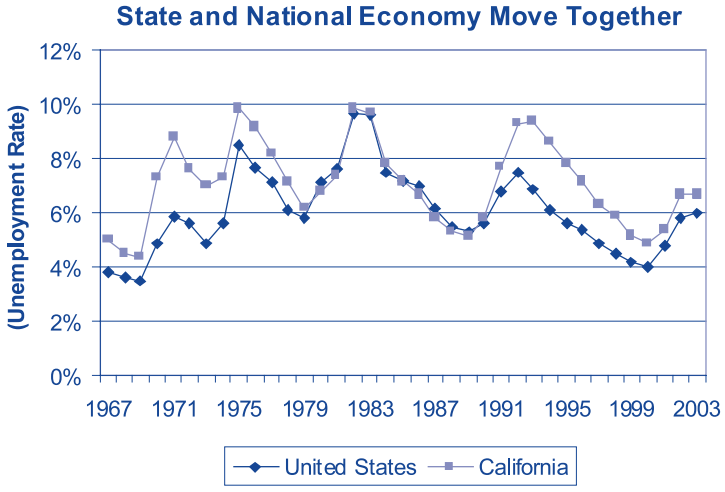
Many areas of workforce shortage are not in the center of a region's economic base. They are in the many population serving sectors like health care, construction and education. So, this Project will focus also on the size of sectors, not just their potential for rapid growth, and look closely at population serving activities as well as each region's economic base.

The State and National Economic Context

The nation is in the midst of the weakest jobs recovery since the Great Depression. In every recession since World War II, job levels were higher 20 months after the recession ended, **except in the current period.** The average jobs gain 20 months after the last seven previous recessions is 5%. A 5% increase in national jobs in the 2001-2003 period would be equal to more than a 6.5 million gain. Instead, the nation has **lost an additional 1.5 million jobs since the end of the recession.**

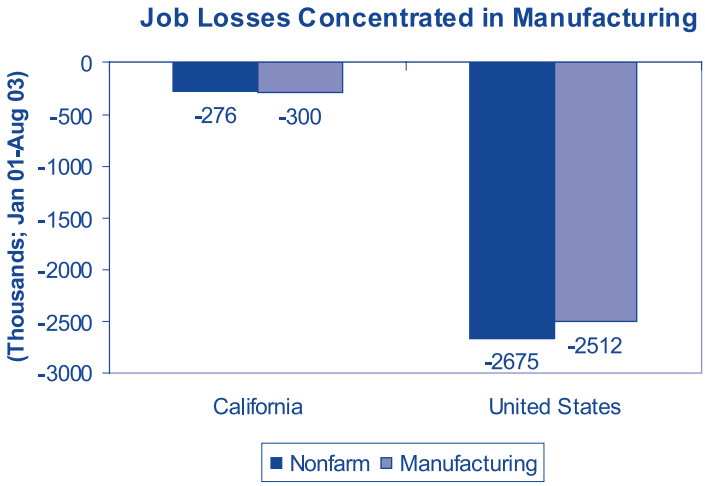


A strong national jobs recovery is essential for renewed job growth in California. While California regions can produce strong job and income growth when the national economy is growing, there are no cases when California regions prospered while the national economy was weak. In fact, as measured by unemployment or job and income growth, the state and nation have a long history of moving up and down together.

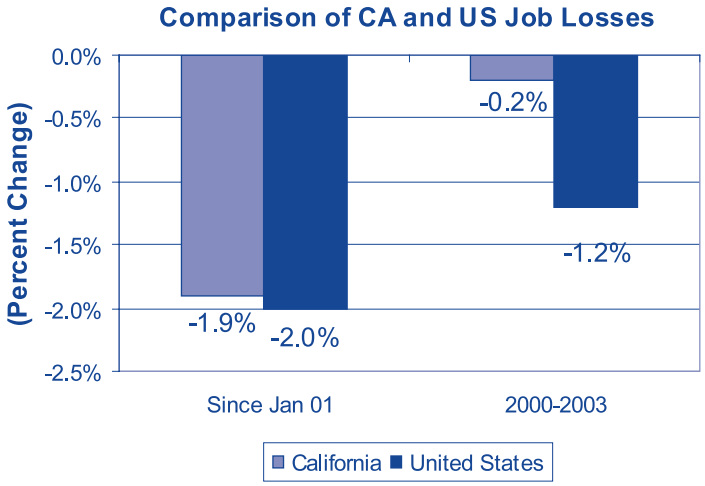


The only two times that the state and nation differed in economic cycles was in the early 70s and early 90s when California trailed the nation as the result of sharp cutbacks in defense spending.

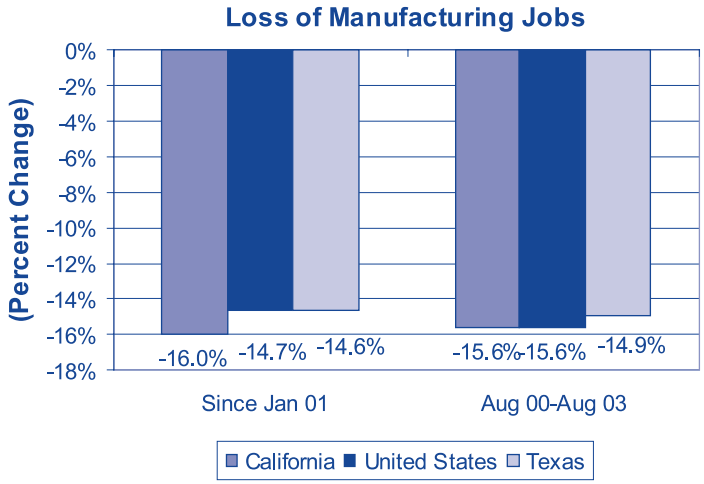
Since January 2001 when the recession began, California lost 276,000 nonfarm wage and salary jobs. During the same period, the state lost 300,000 manufacturing jobs. So, the state's entire recent job losses are accounted for by declines in manufacturing. The same picture emerges at the national level. Since January 2001, the nation lost 2.7 million jobs, of which 2.5 million were in manufacturing.



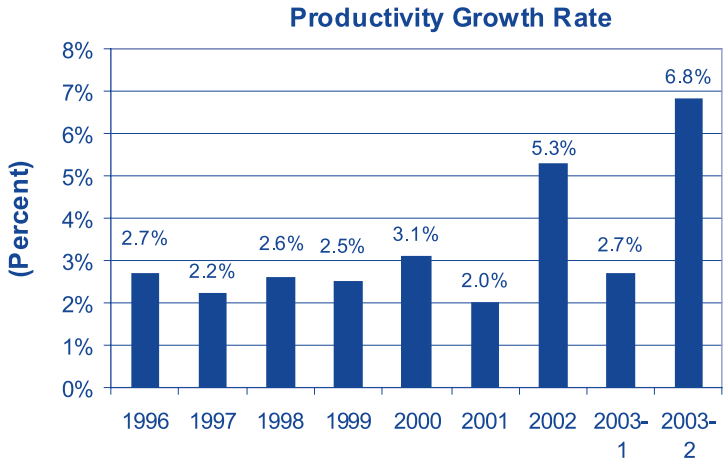
California has the same rate of job loss as the nation or has done a little bit better, depending on what time period is used to measure changes in job levels. Between January 2001 and August 2001, California lost 1.9% of the state's nonfarm jobs, while the nation lost 2.0%. When comparing average job levels in 2000 and 2003, state job levels are down 0.2% (26,600 jobs) while the nation's losses were 1.2%.



Manufacturing job losses were similar among California, Texas and the United States. Manufacturing job losses were approximately 15% since 2000 and did not vary much depending on what time period is used.



Productivity growth is one explanation of the "jobless" recovery. High productivity growth allows firms to produce more without needing additional workers and, in some cases, to produce more **with fewer workers.** Productivity growth has reached extremely high levels in 2002 and 2003. In 2002, productivity growth averaged 5.3% over 2001 levels. Roughly speaking, this level of productivity growth requires real GDP to grow at higher than 6.5% to reduce unemployment rates.



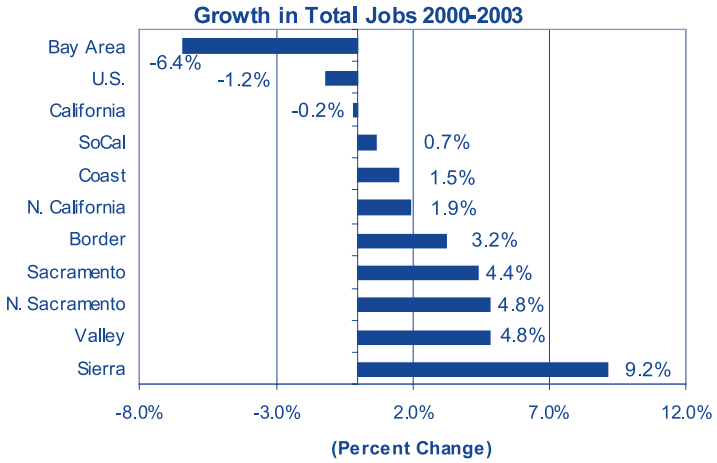
In the first two quarters of 2003, productivity growth is again averaging more than 5%. The estimated GDP gains of 4-5% for the rest of the year will not be enough to secure job growth. This is why, despite a turnaround in GDP growth, that it is almost mathematically certain that the nation will end the year with fewer jobs than in January 2003. And the labor force normally increases by 2 million per year.

Productivity growth is essential for long-term prosperity. Productivity growth allows profits and wages to increase and living standards to rise.

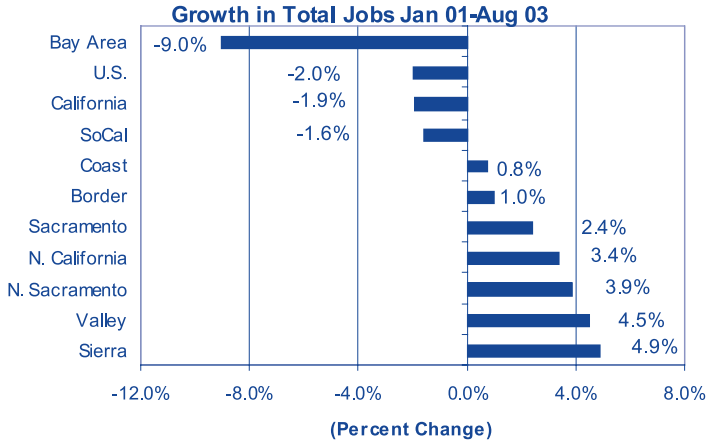
But, in the short-term, this exceptional productivity growth makes the job of getting back to full employment much more difficult. And this productivity growth explains "where" most of the lost manufacturing jobs went - not to another state, not even abroad (although some did), but simply lost because firms needed fewer workers to meet rising sales levels.

Recession Centered in Bay Area

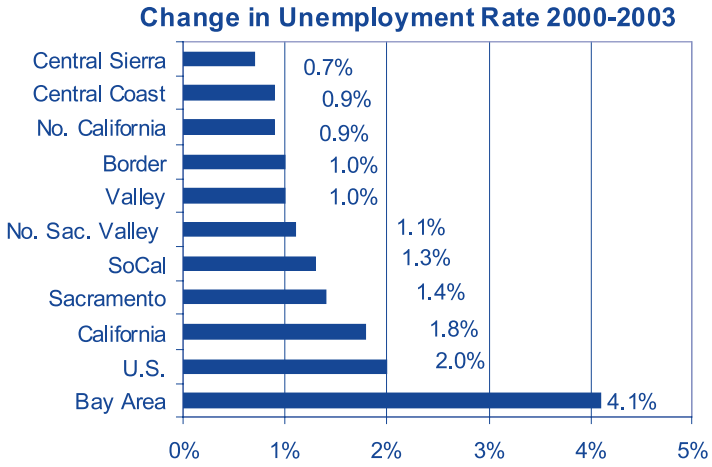
The Bay Area is the only region that lost jobs between 2000 and 2003. The Bay Area lost 253,300 jobs comparing the annual average job levels in 2000 and 2003. The state lost 26,600 jobs. The other eight regions **added 226,700 jobs.** Job gains of more than 4% were recorded in the Central Sierra, Greater Sacramento, Northern Sacramento Valley and San Joaquin Valley regions. Southern California posted a small (0.7%) job increase.



The overall pattern of regional growth does not change much even if one looks at the period starting at the beginning of the recession in January 2001. From January 2001 through August 2003, the Bay area lost 9.0% of the region's job base. Southern California had a job decline of 1.6%, less than the nation's 2.0% job loss, and **all other regions of the state showed job gains,** led by the northern regions and the San Joaquin Valley.

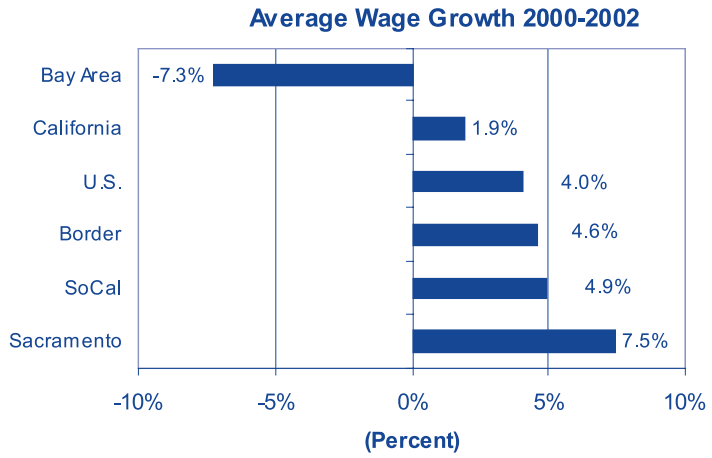


The Bay Area had the largest increase in unemployment rates among California regions since 2000. Bay Area unemployment rates increased by 4.1%, from 2.6% in 2000 to 6.7% so far in 2003. **Every other region of the state, including southern California, had a smaller increase in unemployment rates than the nation.** The Bay Area went from having the lowest regional unemployment rate in California to being near the state average.



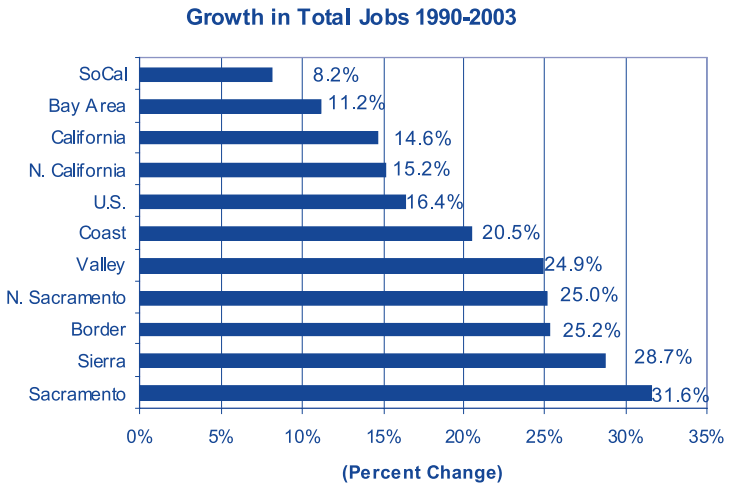
Average wage levels **fell** in the Bay area in 2001 and 2002. Average wages were $56,546 in 2000, $54,182 in 2001 and $52,443 in 2002. Wages rose in all other major regions of the state led by a 7.5% gain in the Greater Sacramento region. Wages in the Greater Sacramento, Border and Southern California region all increased by more than the national average between 2000 and 2002.

Even with the wage losses, the Bay Area still had, by far, the state's highest wage levels in 2002.

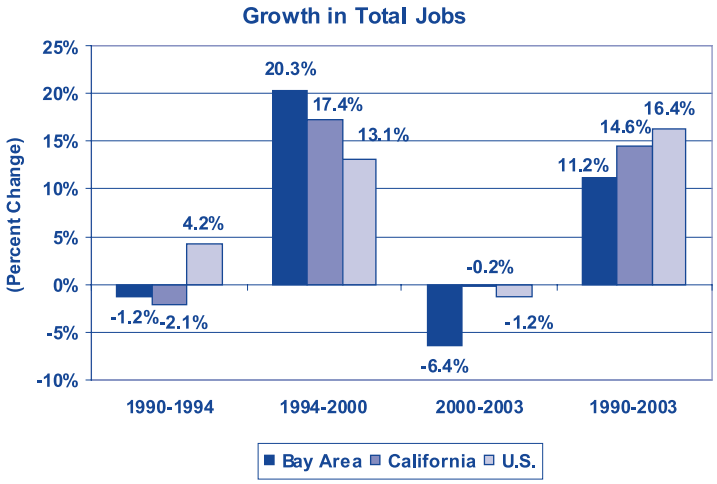


Comparison of Regions

The Bay Area had the second lowest job growth rate since 1990 among the state's nine regions. Jobs in the Bay Area increased by 11.2% compared to the nation's 16.4% gain. Only Southern California with an 8.2% increase trailed the Bay Area. The Greater Sacramento region had the largest gain at 31.6%.

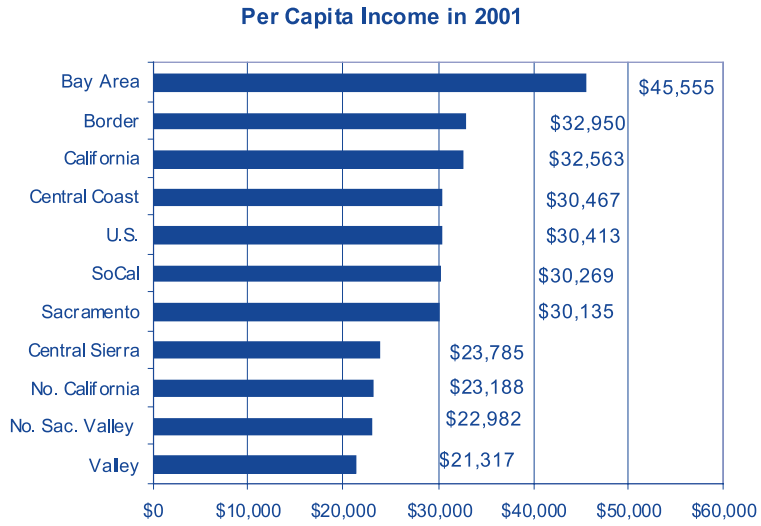


Bay Area job growth is made up of three distinct periods. **The Bay Area outpaced the state and nation in job growth between 1994 and 2000.** Job levels in the Bay Area rose by 20.3% compared to 17.1% in California and 13.4% in the nation.

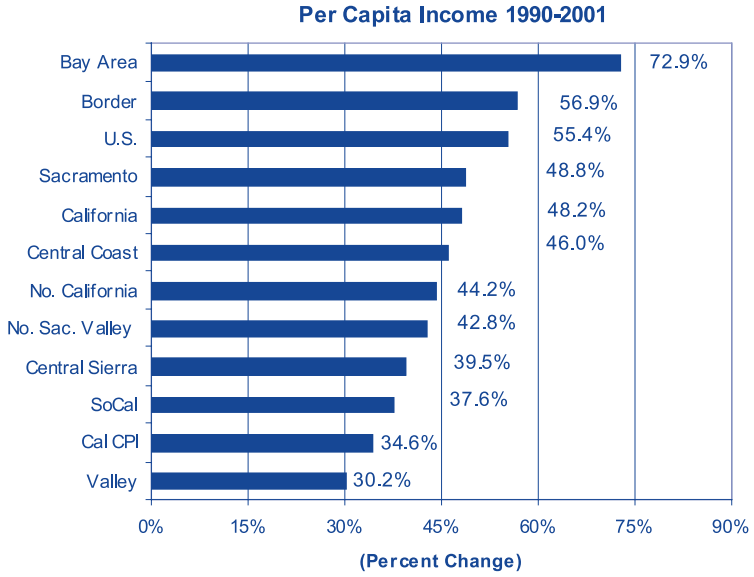


But the strong growth in the mid 90s was offset by the very poor comparative job growth since 2000 and the job losses in the early 1990s. In part, the job losses since 2000 reflect that some of the late 90s job gains were transitory as new firms formed to compete for the same market and many did not survive.

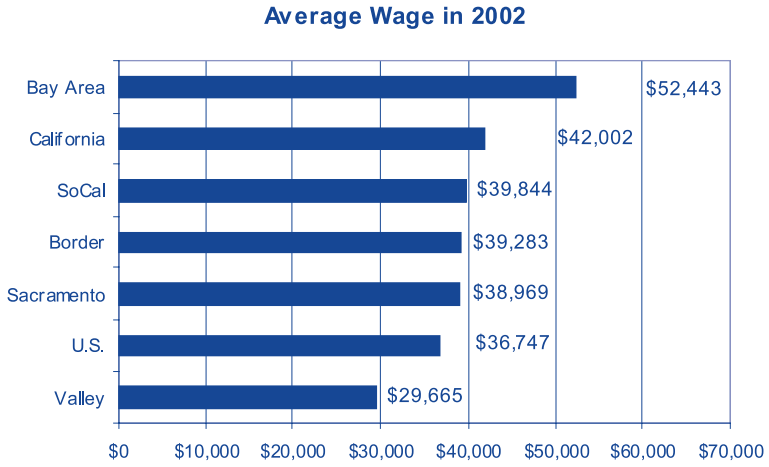
The Bay Area has, by far, the highest per capita income among California regions. Per capita income of $45,555 in 2001 places the Bay Area nearly 50% higher than the nation. While this advantage will narrow in 2002 and 2003, there will be no change in the region's top ranking in the nation. The Bay Area remains the highest-wage, highest-income region in the nation.



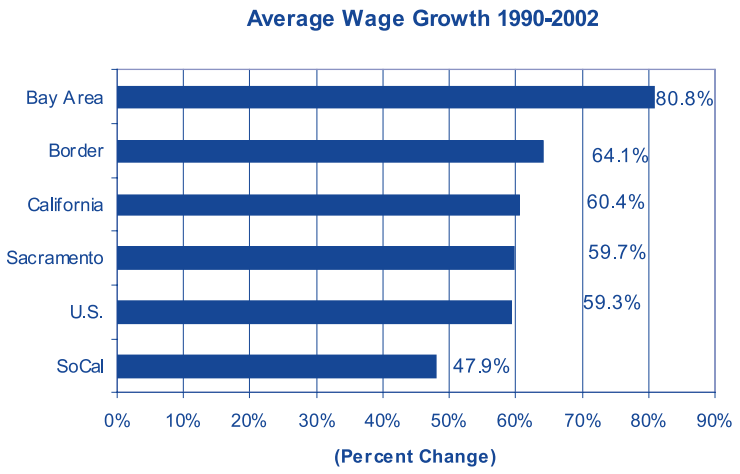
The Bay Area also had the highest per capita income growth rate among California regions. Per capita income rose by 72.9% between 1990 and 2001, more than twice the rate of growth in consumer prices - 34.6%. Only one region, the San Joaquin Valley, had per capita income growth that was less than the rise in consumer prices. The Border region and Greater Sacramento had the largest growth behind the Bay Area.



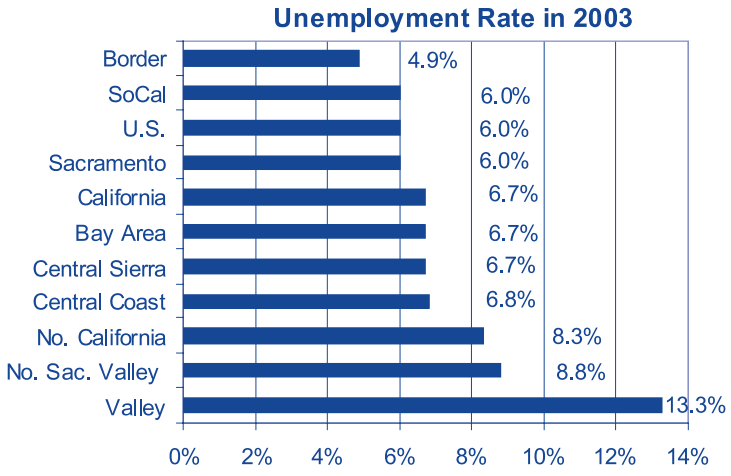
The Bay Area had the highest wage levels in the state and nation in 2002, even after two years of declining wages. **And the average wage of $52,443 was more than 40% above the national average.** Wage levels in the Southern California, Border and Greater Sacramento region were above the national average while average wage levels in the San Joaquin Valley remained substantially below the state and national average.



The Bay Area had the highest wage growth since 1990 among California's largest regions. Average wage levels increased by 80.8% between 1990 and 2001 compared to the national increase of 59.3%. The Border and Greater Sacramento regions slightly outpaced the nation in wage growth while Southern California lagged behind.



For the first time in a decade, the Bay Area unemployment rate moved above the national average in 2002 and remained higher in 2003. The region's 6.7% unemployment rate compares 6.7% in the state and 6.0% in the nation for the year to date. The state's lowest unemployment rates were 4.9% in the Border region and 6.0% in Southern California and the Greater Sacramento region. The highest rate was 13.3% in the San Joaquin Valley.

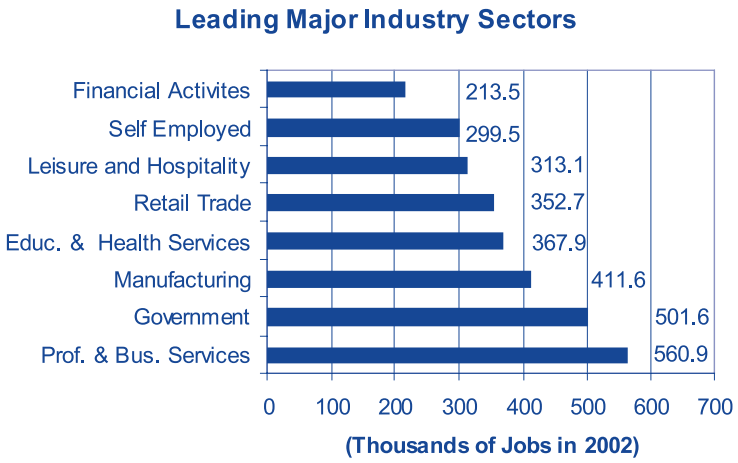


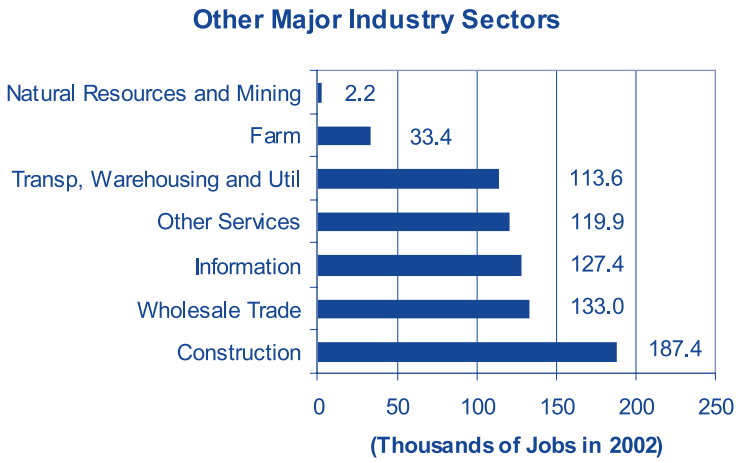
Major Industry Sectors in the Bay Area

The major industry categories for reporting jobs data have changed with the introduction of the North American Industry Classification System (NAICS). Some of the major industry categories like Construction, Manufacturing, Financial Activities, Wholesale Trade, Farm and Government, have either identical or similar names to the previous SIC-based categories and cover approximately the same set of industries and workers. The NAICS Retail Trade category is the same as before, but without eating and drinking establishments, which have been moved to the new Leisure and Hospitality industry.

Some major industry categories are new including Professional and Business Services, Information, Educational and Health Services, Transportation, Warehousing and Utilities and Leisure and Hospitality. Within the NAICS major industry categories are many new industry categories like telecommunications, ISPs, software publishing, childcare, and couriers.

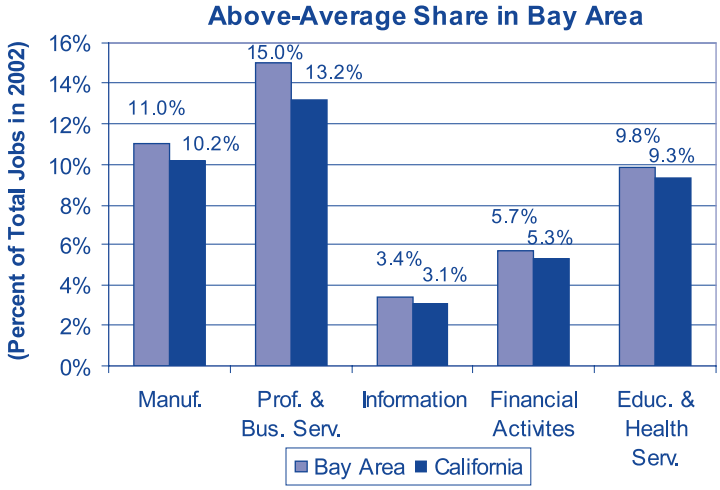
The Bay Area had 3.7 million jobs in 2002. Professional and Business Services was the largest major industry sector with 560,900 jobs. Government was the second largest sector with 501,600 jobs followed by manufacturing with 411,600 jobs. The new Information sector had 127,400 jobs in 2002.



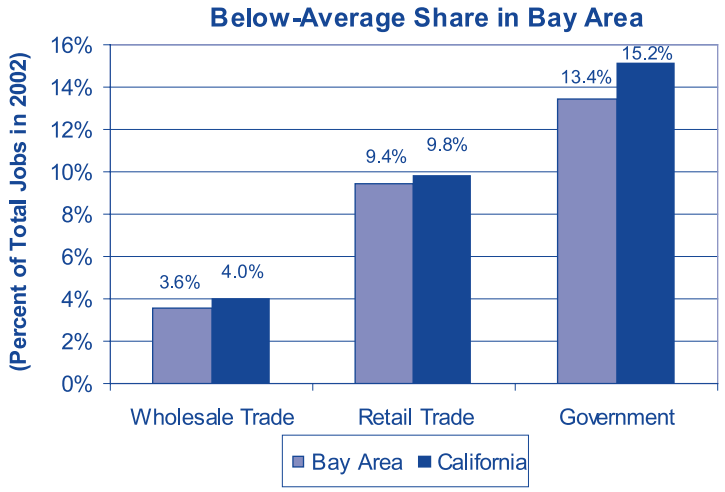


The distribution of jobs by major industry group in the Bay Area is similar to the statewide pattern. As expected, the Bay Area has a slightly above average shares in Manufacturing, Professional and Business Services, Information and Financial Activities - all sectors that use technology heavily and pay above-average wages.

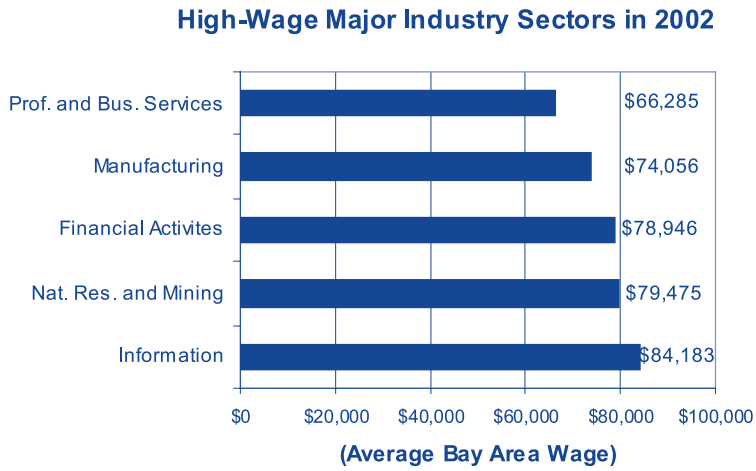
But the share advantages are not large. For example, Manufacturing accounted for 11.0% of jobs in the Bay Area in 2002 compared to 10.2% for the state. The difference was slightly larger for Professional and Business Services, which include computer, management and research services. This sector accounted for 15.0% of Bay area jobs compared to 13.2% for the state.



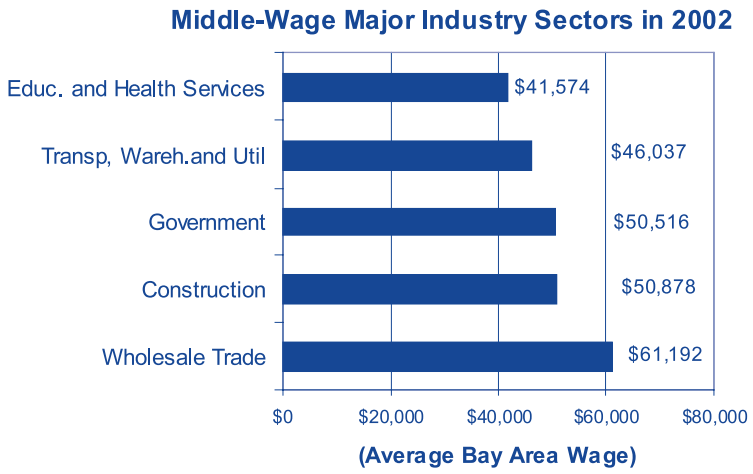
The Bay Area had a slightly below average concentration in Wholesale and Retail Trade and Government. Government jobs accounted for 13.4% of Bay Area jobs in 2002 compared with 15.2% for the state.



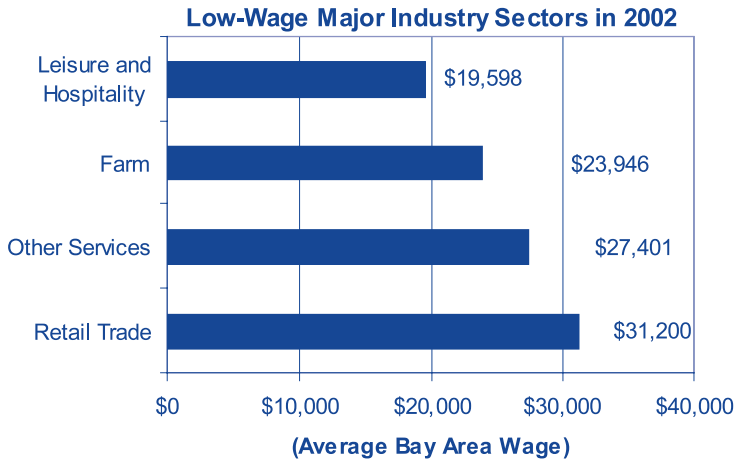
Five major industry sectors had wage levels significantly above the regional average of $52,443 in 2002. The Information sector had an average wage of $84,183 followed by Natural Resources and Mining ($79,475), Financial Activities ($78,946), Manufacturing ($74,056), and Professional and Business Services ($66,285).



Five major industry sectors had average wages near the regional average in 2002 including Wholesale Trade ($61,192), Construction ($50,878), Government ($50,516), Transportation, Warehousing and Utilities ($46,037) and Educational and Health Services (($41,574).

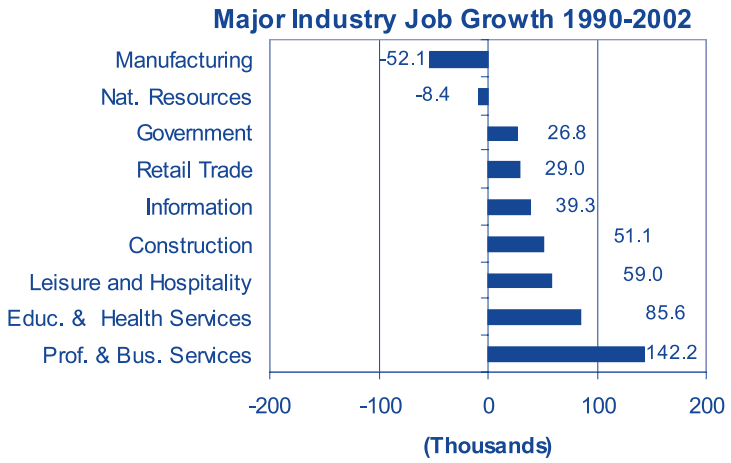


Four major industry sectors have average wages that are far below the regional average for all Bay Area jobs. These sectors include Retail Trade ($31,200), Other Services ($27,401), Farm ($23,946) and Leisure and Hospitality ($19,598).



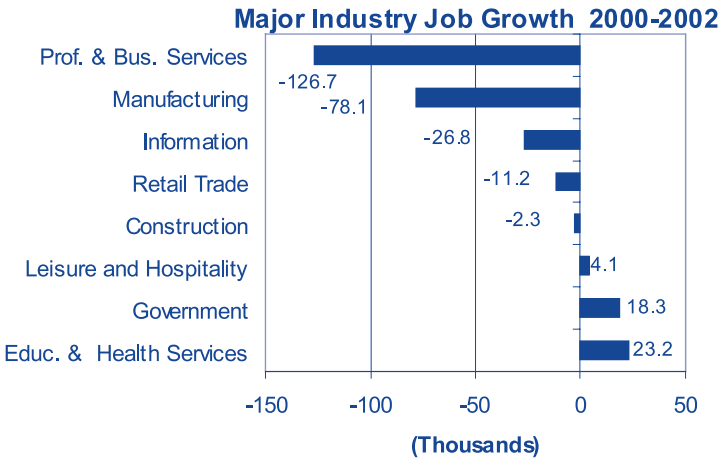
Professional and Business Services led the region's job growth since 1990. The sector, which includes the largest component of the region's economic base, added 142,200 of the 417,200 job growth in the Bay Area. Major job growth came also from population serving sectors including Educational and Health Services, Leisure and Hospitality, Construction and Retail Trade.

Smaller gains were recorded in Government, Financial Activities, Other Services and Wholesale Trade. Manufacturing was the only sector with significant job losses between 1990 and 2002 - with a more than 50,000 decline in job levels between 1990 and 2002.

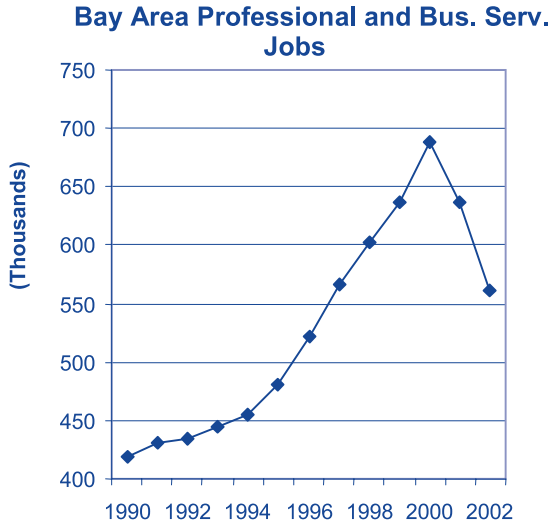


Since 2000, the region's job losses were heavily concentrated in three high tech sectors - Manufacturing, Professional and Business Services and Information. Professional and Business Services lost the most jobs (-126,700) in just two years followed by Manufacturing (-78,100 jobs) and Information (-26,800).

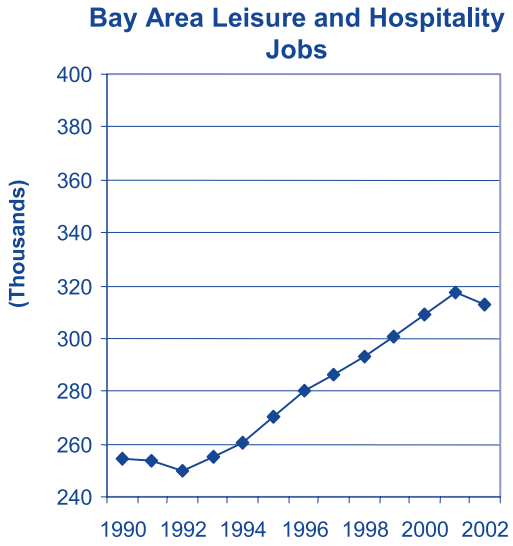
The Bay Area added jobs in most population-serving sectors. The largest gains were in Government (+18,300) and Educational and Health Services (+23,200).

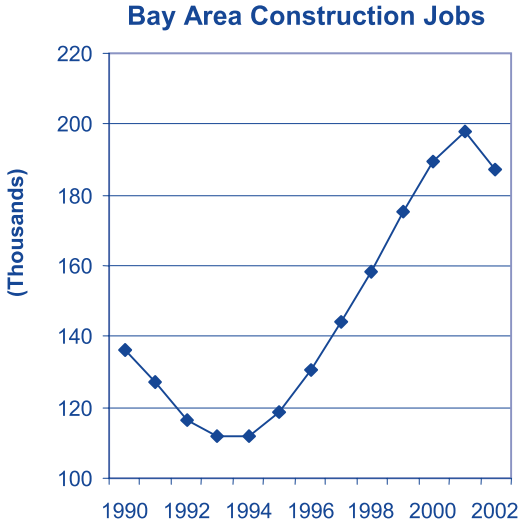


Four large major industries have shown a distinctly cyclical pattern in job levels since 1990. These sectors - Manufacturing, Information, Professional and Business Services and Retail Trade - recorded strong job growth between 1994 and 2000 and job losses during the two recession periods.



Three large major industries—Educational and Health Services, Leisure and Hospitality and Government—have shown steady job gains even through recession periods. These sectors mainly serve the local population and are relatively less sensitive to the business cycle and more sensitive to long-term population and income growth. Construction has some cyclical factors and some long-term growth factors underlying the sector's job growth trends.





Bay Area Economic Base

The Bay Area's economic base is made up of those industries that sell a large portion of their goods or services to people and businesses in markets **outside of the Bay Area.** Most manufacturing industries sell mainly to markets in other states or countries. For example, approximately 50% of Bay Area high tech production is sold abroad.

Many service industries are included in the region's economic base. Most professional, technical and scientific service firms sell to worldwide markets; tourism and wholesale trade serve worldwide markets and software, Internet and other telecommunications services do not depend mainly on local markets for sales.

Firms in any region's economic base are important for three principal reasons. First, firms in economic base industries have **a choice in where to locate.** Because high tech or computer service firms serve worldwide markets, they do not have to locate in a particular place to serve their customers.

Second, firms in the economic base, usually, but not always, pay above average wages.

Third, regions often compete for the location of economic base industries. For example, business and community groups in the Bay Area are continually assessing what should be done to boost the region's share of new biotechnology or nanotechnology venture capital and innovation. Part of this "competition" for new firms involves assessing their workforce needs and designing education or training initiatives to meet potential workforce shortages.

Approximately 40% of Bay Area jobs in 2002 were in the region's economic base. This means that 60% of the jobs were in sectors that mainly serve the local population. In designing workforce programs, it is often easy to concentrate on the economic base while overlooking opportunities and needs in population-serving industries, for example, in nursing or construction.

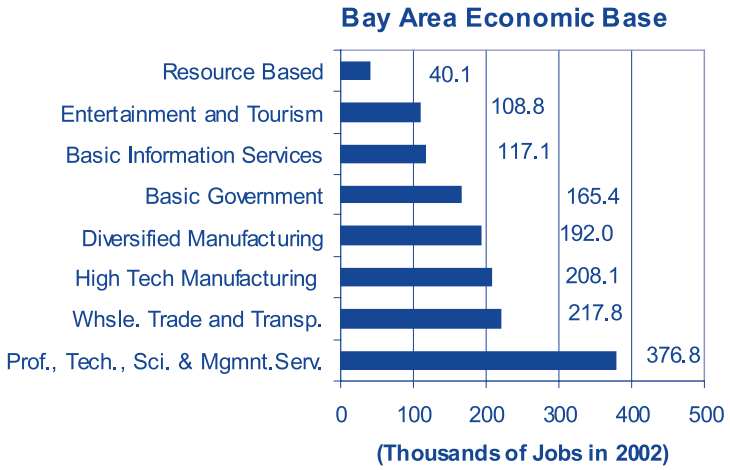
The Bay Area's economic base has been grouped into eight major sectors for purposes of analysis and discussion:

High Tech Manufacturing
Diversified Manufacturing
Wholesale Trade and Transportation
Professional, Technical, Scientific and Management Services
Basic Information Services
Entertainment and Tourism
Basic Government Services (Federal and State Government)
Resource Based

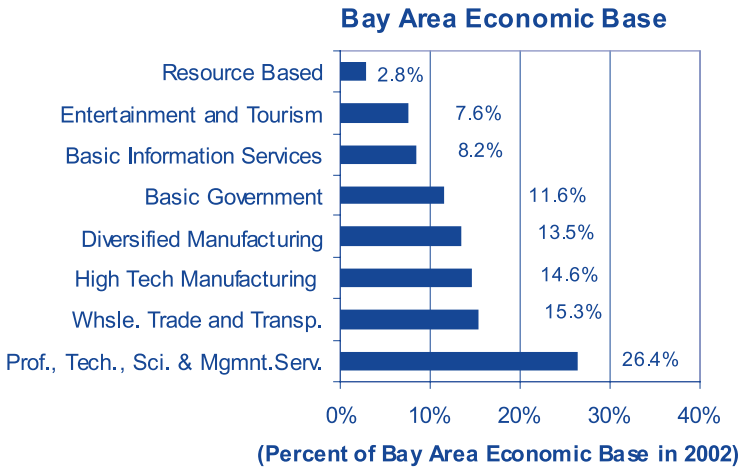
A complete list of industries in each major economic base sector is shown in Appendix A.

Professional, Technical, Scientific and Management Services is now the largest sector in the Bay Area's economic base with 376,800 jobs in 2002. Next come Wholesale Trade and Transportation (217,800 jobs), Diversified Manufacturing (211,200 jobs) and High Tech Manufacturing (208,100 jobs). Smaller sectors include Basic Government (165,400 jobs), Basic Information Services (147,900 jobs), Entertainment and Tourism (108,800 jobs), and Resource Based (40,100 jobs).

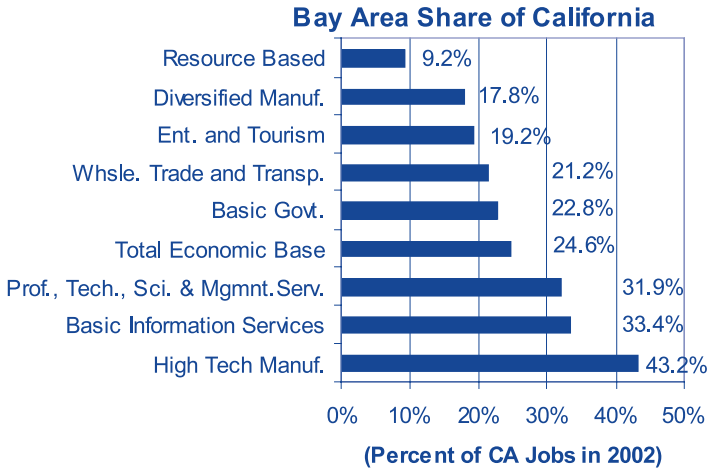
The Bay Area economic base is diversified among the eight major sectors. Professional,



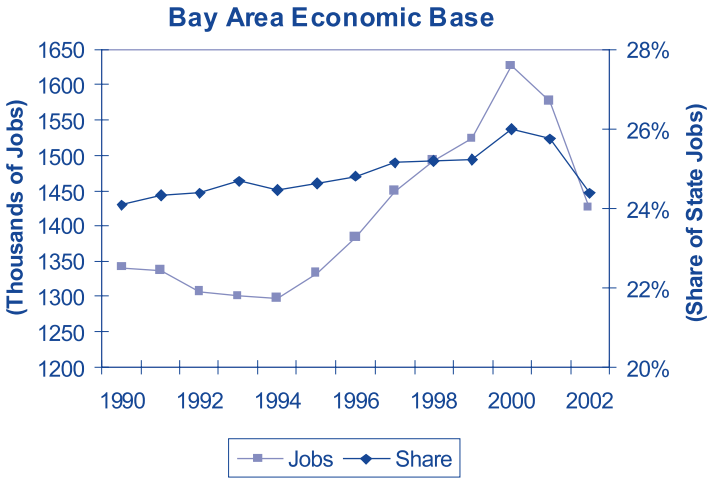
Technical, Scientific and Management Services is the largest component, accounting for 26.4% of the region's basic industry jobs. Four sectors - Wholesale Trade and Transportation, High Tech Manufacturing, Diversified Manufacturing and Basic Government - each account for between 10% and 15% of economic base jobs.



The Bay Area has approximately 1/4 (24.8%) of California's economic base jobs. **The Bay Area has an above-average share in three sectors - all related to information and technology.** The Bay area has 43.2% of the state's high tech manufacturing jobs, 33.4% of basic information service jobs and 31.9% of professional, technical, scientific and management jobs - all high-wage sectors.

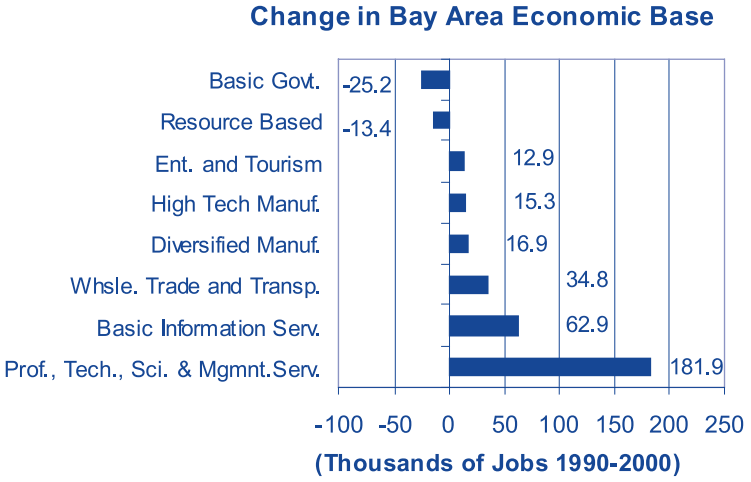


The Bay Area share of California's basic industry jobs was relatively constant since 1990 - fluctuating between 24% and 26% of the state total. Basic jobs increased by 300,000 between 1990 and 2000 and then declining by 200,000 during the next two years.

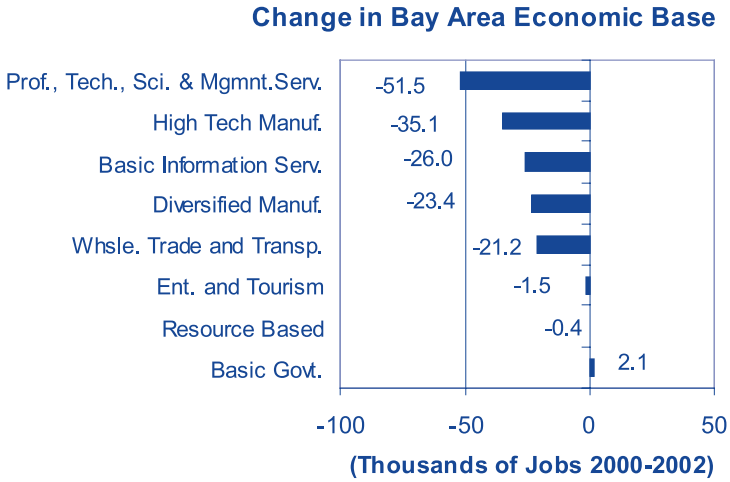


In the 1990s, the Bay Area's economic base growth was led by Professional, Technical, Scientific and Management Services, which recorded an increase of 181,900 jobs or more than 60% of the entire economic base job gains. Next in size were the gains in Basic Information Services (80,300 jobs) and Wholesale Trade and Transportation (34,800 jobs). Small gains were recorded in High Tech and Diversified Manufacturing and Entertainment and Tourism.

The only economic base job losses in the 1990s were in Resource Based industries and Government, accounted for by base closings.

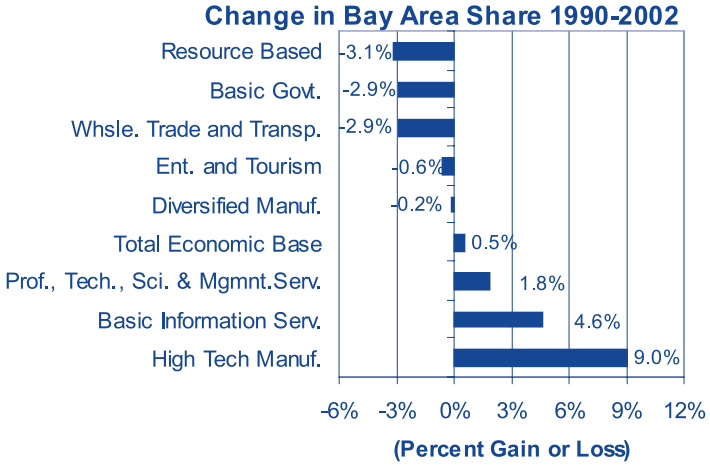


More than half of the region's job losses after 2000 were in economic base sectors. Professional, Technical, Scientific and Management Services gave back 51,500 jobs followed by High Tech Manufacturing (-35,100), Basic Information Services (-26,000), Diversified Manufacturing (-24,400), and Wholesale Trade and Transportation (-21,200).



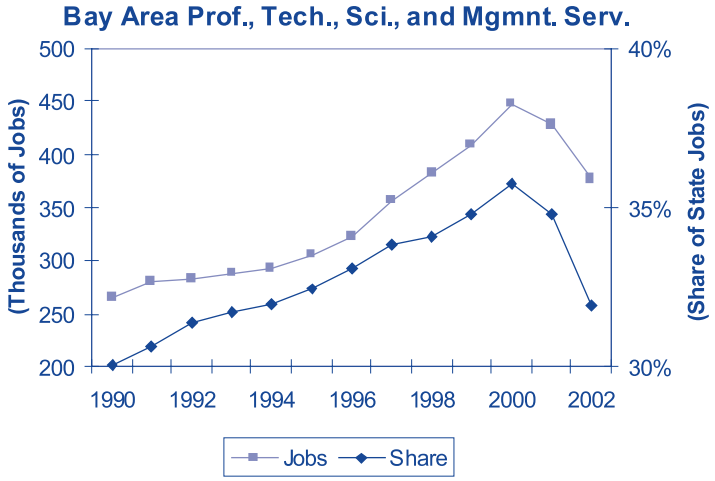
Despite the sharp loss in jobs and, especially, in high-wage jobs since 2000, the Bay Area recorded **share gains** since 1990 in three important economic base sectors. The Bay Area share of high tech manufacturing jobs rose from 34.2% of the state total in 1990 to 43.2% in 2002. The region's share of Basic Information sector jobs rose from 28.8% to 33.4% and the Bay Area's share of Professional, Technical, Scientific and management jobs rose from 30.1% in 1990 to 31.9% in 2002.

Despite the sharp loss in basic jobs between 2000 and 2002, the region's overall share of California's economic base rose from 24.1% in 1990 to 24.6% in 2002. The 2002 share was down from the peak share of 26.2% in 2000.



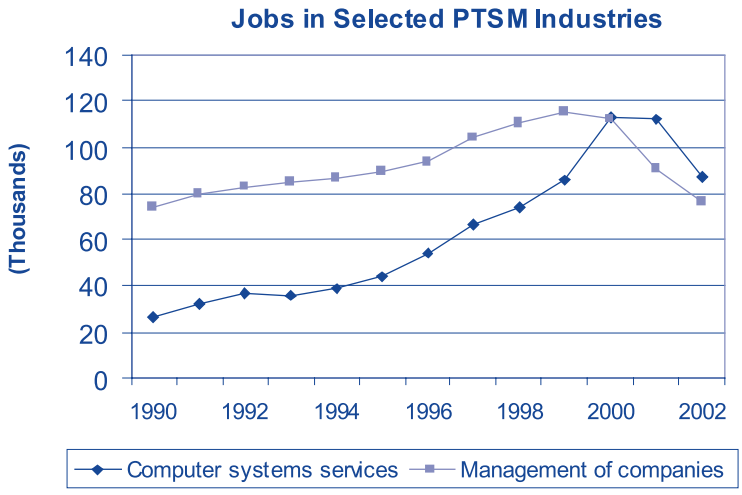
Professional, Technical, Scientific and Management Services

Professional, technical, scientific and management services is the largest component of the Bay Area's economic base measured by job levels. The sector accounted for 376,800 jobs in 2002, down from 447,400 in 2000 but up from 265,500 in 1990. The Bay Area had 31.9% of statewide sector jobs in 2002, down from a high of 35.8% in 2000 but up from 30.1% in 1990.

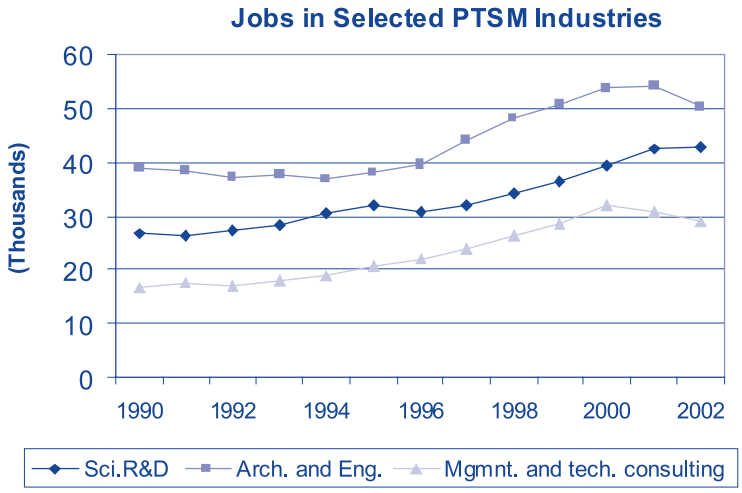


Computer design and services and management of companies are the biggest sectors within professional, technical, scientific and management services. Computer design and services had 87,100 jobs in 2002 more than three times the 1990 total of 26,400 jobs. Management accounted for 76,300 jobs in 2002, down from 112,200 in 2000 and approximately the same as the 1990 job level.

The Bay Area had 50.3% of statewide computer design and services jobs in 2002 and 27.6% of statewide management jobs.



Three sectors added jobs fairly steadily since 1990. Architectural and engineering services recorded 50,300 jobs (32.4% of the statewide total) in 2002 for a gain of 11,500 jobs since 1990. Scientific R&D services recorded 42,600 jobs in 2002 (45.9% of the state total) for an increase of 15,600 jobs since 1990. There were 28,900 jobs in management and technical consulting up 12,100 from 1990 levels.



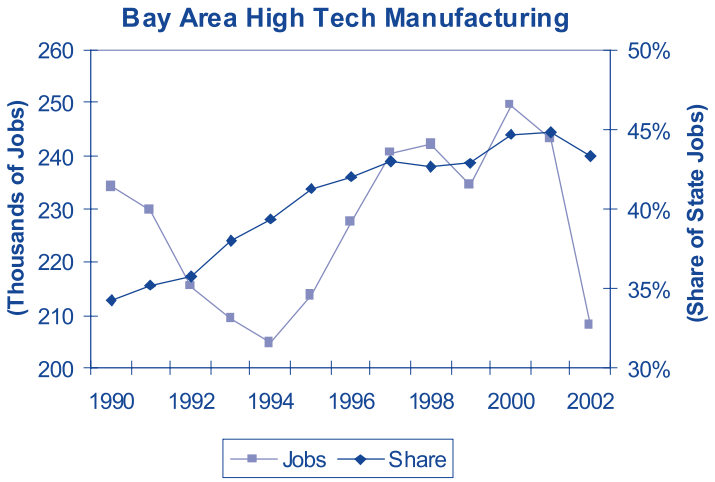
San Francisco Bay Area
Professional, Technical, Scientific and Management Services
(Thousands of Jobs)

	1990	2000	2002	% of California 2002
Legal services	33.0	36.5	37.4	27.6%
Accounting services	22.8	24.2	23.2	22.3%
Architectural and engineering services	38.8	53.8	50.3	32.4%
Specialized design services	3.7	7.1	6.4	27.1%
Computer systems services	26.4	112.6	87.1	50.3%
Management. and technical consulting	16.8	31.9	28.9	28.5%
Scientific R & D services	26.8	39.3	42.6	45.9%
Advertising and related services	12.9	17.7	12.5	20.4%
Other professional and technical services	10.1	12.1	12.1	21.0%
Management of companies	74.2	112.2	76.3	27.6%
Professional, Technical, Scientific and Management Services	265.5	447.4	376.8	31.9%

Source: EDD

High Tech Manufacturing

High Tech manufacturing job levels fluctuated between 200,000 and 250,000 with job losses occurring in each of the two recession periods. The Bay Area's share of state high tech manufacturing jobs rose steadily during the 1990-2002 period.



Most of the high tech manufacturing jobs were in three sectors - computer and peripheral equipment (49,700 jobs in 2002), semiconductors and electronic components (71,700) and electronic instruments (40,700), which includes measuring and control instruments. The largest percentage job gains were in pharmaceuticals where job levels rose from 8,600 in 1990 to 14,000 in 2002. However, pharmaceutical jobs still account for only a small portion of Bay Area high tech manufacturing jobs.

The Bay Area maintains high shares of statewide jobs in most high tech sectors, led by a 70.1% share in computer and peripheral equipment manufacturing. The largest high tech job losses were in aerospace and centered in the space area.

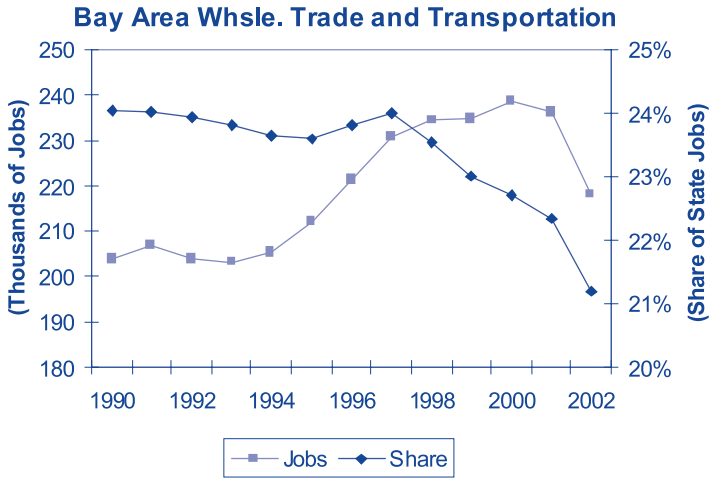
San Francisco Bay Area
High Tech Manufacturing
(Thousands of Jobs)

	1990	2000	2002	% of California 2002
Computer and peripheral equip.	54.1	58.8	49.7	70.1%
Communications equipment	18.0	21.9	15.6	45.5%
Audio and video equipment	1.5	1.6	1.3	15.1%
Semiconductors and elec. comp.	73.5	91.6	71.7	57.4%
Electronic instruments	47.7	45.4	40.7	36.8%
Magnetic media	5.2	8.1	5.7	48.7%
Aerospace	25.6	9.6	9.4	11.7%
Pharmaceuticals	8.6	12.5	14.0	34.9%
High Tech Manufacturing	234.2	249.5	208.1	43.2%

Source: EDD

Wholesale Trade and Transportation

Wholesale Trade and Transportation accounted for 217,800 basic industry jobs in the Bay Area in 2002. The Bay Area had 21.2% of the state's wholesale trade and transportation jobs. Sector jobs rose by 35,000 between 1990 and 2000 and then dropped by 20,000 in 2002. The region's share of wholesale trade and transportation jobs fell slightly between 1990 and 2002.



Wholesale trade accounts for more than 50% of the jobs in the sector. Wholesale durable goods-related jobs have risen and fallen with the level of Bay Area exports. The region had 77,600 wholesale trade durable goods jobs in 2002 - one of the region's largest basic industry sectors measured by jobs. Air transportation jobs rose until the 9/11 bombings and have fallen since, continuing into 2003.

One of the new NAICS industries, Couriers and Messengers, is in this sector. Job levels rose from 12,300 in 1990 to 20,600 in 2002.

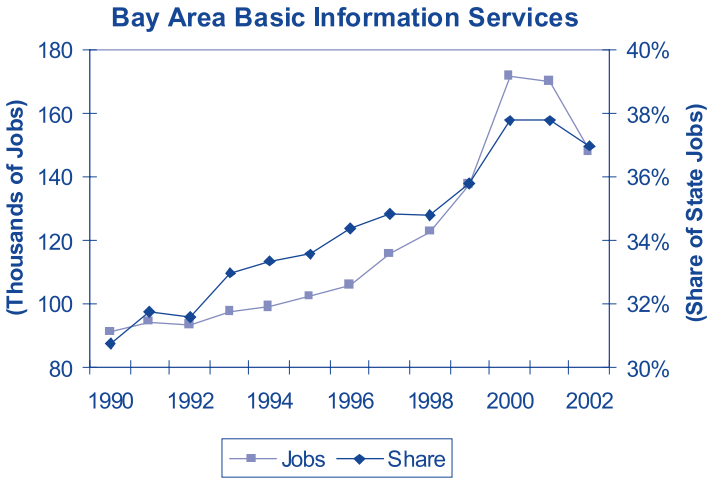
San Francisco Bay Area
Wholesale Trade and Transportation
(Thousands of Jobs)

	1990	2000	2002	% of California 2002
Wholesalers, durable goods	71.9	85.1	77.6	21.7%
Wholesalers, nondurable goods	35.8	42.8	41.1	17.8%
Air transportation	28.0	30.3	26.6	44.9%
Rail transportation	3.4	1.7	1.7	13.3%
Water transportation	3.3	1.4	2.3	52.3%
Truck transportation	22.7	20.3	17.3	15.4%
Transit and ground transportation.	5.6	8.8	9.1	25.3%
Pipeline transportation	0.3	0.1	0.2	7.7%
Scenic and sightseeing	0.5	0.9	0.8	25.0%
Support activities	12.5	14.5	13.3	17.1%
Couriers and messengers	12.3	23.3	20.6	28.8%
Warehousing and storage	7.4	9.3	7.2	12.1%
Wholesale Trade and Transportation	203.7	238.5	217.8	21.2%

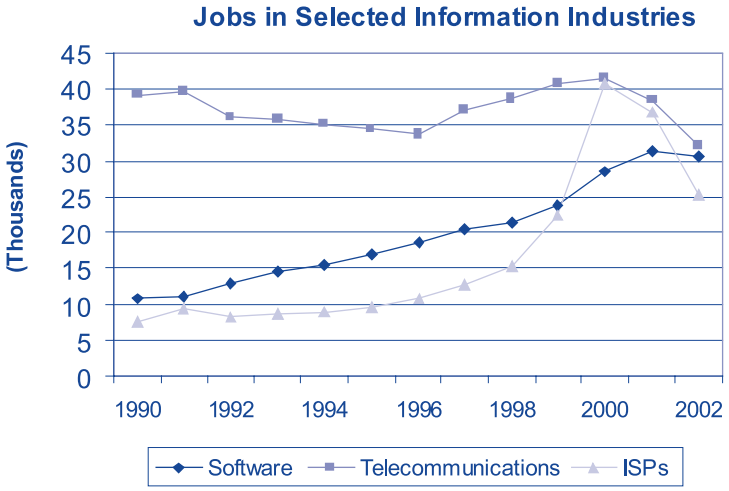
Source: EDD

Basic Information Services

Information is a new NAICS industry category and most of the component industries are also new in terms of following job trends. The Bay Area had 117,100 jobs in the basic industry portion of Information, down from 143,100 in 2000. The Bay Area accounted for 33.4% of statewide jobs in the Basic Information Services sector. Both job levels and the region's share of statewide jobs have grown since 1990.



The three largest components of this sector are Telecommunications (including telephone service providers like SBC) with 32,100 jobs in 2002, followed by software publishers (30,700) and ISPs/data processing with 25,300 jobs. Two sectors - software and ISPs- showed rapid job growth until 2000, followed by job losses in the next two years.



The number of jobs in software publishing grew from 10,800 in 1990 to 30,700 in 2002. ISP and data processing jobs rose from 7,600 in 1990 to 40,700 in 2000 before falling back to 25,300 jobs in 2002. Modest job growth was recorded in the broadcasting sector, which includes cable.

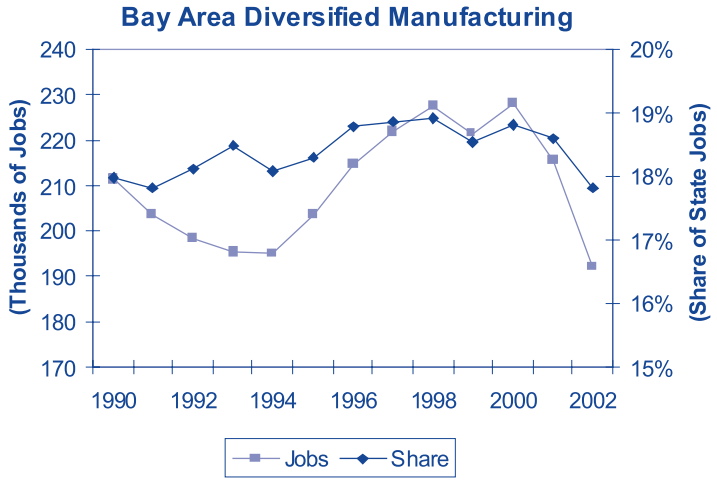
San Francisco Bay Area
Basic Information Services
(Thousands of Jobs)

	1990	2000	2002	% of California 2002
Publishing industries, except Internet	16.7	17.8	15.9	25.6%
Software publishers	10.8	28.4	30.7	62.8%
Broadcasting, except Internet	5.4	6.5	10.2	23.0%
Internet publishing and broadcasting	0.1	7.8	2.4	35.8%
Telecommunications	39.2	41.5	32.1	24.1%
ISPs and data processing	7.6	40.7	25.3	47.6%
Other information services	0.4	0.4	0.5	17.2%
Basic Information Services	80.2	143.1	117.1	33.4%

Source: EDD

Diversified Manufacturing

The Bay Area has almost as many jobs in diversified manufacturing industries as in high tech. In 2002, the region had 192,600 diversified manufacturing jobs, 17.8% of the state total. As with high tech, diversified manufacturing job levels fluctuated with the economy since 1990. The region's share of state diversified manufacturing jobs is below the Bay Area's share of total jobs and economic base jobs.



No diversified manufacturing industry had as many as 30,000 jobs in 2002. The largest single diversified manufacturing industry was machinery with 26,400 jobs followed by fabricated metal products with 23,400 jobs, food manufacturing excluding canning (20,800), and miscellaneous manufacturing (19,200).

The largest job gains were in machinery, beverages and miscellaneous manufacturing; with the largest single industry gain was a 9,000 job increase in machinery. The largest job losses were in printing, apparel and petroleum products.

San Francisco Bay Area
Diversified Manufacturing
(Thousands of Jobs)

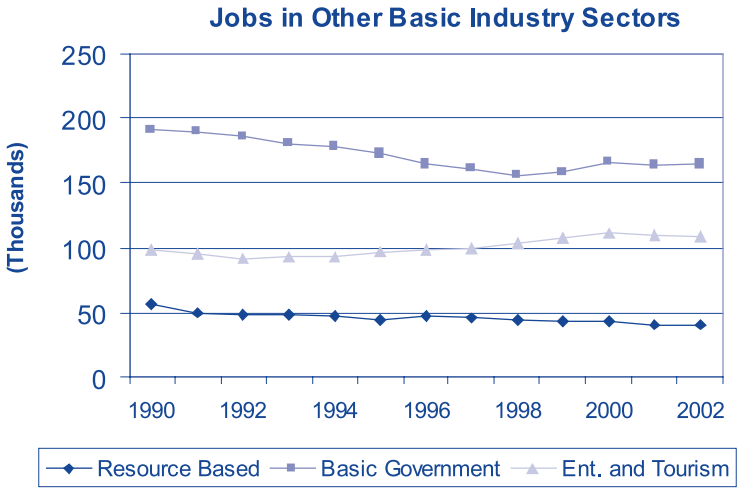
	1990	2000	2002	% of California 2002
Wood product manufacturing	4.6	3.9	3.3	8.1%
Nonmetallic minerals	10.4	10.5	9.4	20.4%
Primary metal manufacturing	8.0	6.7	5.6	20.7%
Fabricated metal products	25.6	34.4	23.4	15.9%
Machinery manufacturing	17.4	31.7	26.4	28.4%
Electrical equipment	8.3	8.1	6.7	16.8%
Ship and boat building	0.9	0.8	0.6	6.7%
Other transportation equipment	4.3	2.4	1.6	29.6%
Furniture	7.1	8.2	7.2	10.5%
Miscellaneous manufacturing	14.8	20.7	19.2	20.4%
Other food manufacturing	24.9	21.2	20.8	17.7%
Beverages	12.1	16.9	16.9	48.4%
Textile mills	0.3	0.5	0.6	4.0%
Textile product mills	1.5	1.7	1.4	8.1%
Apparel manufacturing	13.8	11.3	7.7	8.0%
Leather	0.7	0.9	0.5	8.6%
Paper manufacturing	6.3	5.7	4.8	15.2%
Printing	18.9	17.8	13.1	18.6%
Petroleum	11.9	7.9	8.2	55.0%
Other chemical manufacturing	12.3	8.1	7.8	19.4%
Plastics and rubber products	7.2	8.8	6.8	10.6%
Diversified Manufacturing	211.3	228.2	192.0	18.0%

Source: EDD

Other Basic Industry Sectors

The three remaining sectors in the Bay Area economic base are Basic Government (federal and state government) with 165,400 jobs in 2002, Entertainment and Tourism (105,800 jobs) and Resource Based (40,100 jobs).

Federal government job levels fell between 1990 and 2002 as both military base and civilian job levels declined by nearly 40,000 total jobs. These losses were partially offset by a 13,000 increase in state government job levels, primarily in state education.



In 2002, the Bay Area had 108,800 jobs in the Entertainment and Tourism sector, led by 46,600 in accommodations (hotels and motels). The Bay Area accounted for 19.2% of the state job total in this sector.

San Francisco Bay Area
Other Basic Industry Sectors
(Thousands of Jobs)

	1990	2000	2002	% of California 2002
Motion pictures	7.8	11.1	10.2	6.9%
Performing arts and sports	21.2	12.2	12.0	20.5%
Museums, zoos, and parks	1.7	3.0	3.7	29.1%
Amusement, gambling, and rec.	23.8	36.8	36.3	22.8%
Accommodations	43.6	47.9	46.6	24.5%
Entertainment and Tourism	98.1	111.0	108.8	19.2%
Department of Defense	38.5	23.6	20.9	36.9%
Federal government except defense	58.0	42.3	37.0	18.7%
State education	47.8	53.7	57.0	27.4%
State government except education	47.0	46.5	50.5	19.1%
Basic Government	191.3	166.1	165.4	22.8%
Agriculture, forestry, fishing	33.3	34.2	33.4	8.8%
Mining	10.6	3.6	2.2	10.8%
Fruit and vegetable preserving	12.1	4.8	4.5	11.7%
Resource Based	**56.0**	**42.6**	**40.1**	**9.2%**

Source: EDD

Resource based jobs fell from 56,000 in 1990 to 40,100 in 2002 with the major job losses in mining and fruit and vegetable preserving.

APPENDIX A

Industries Included in Regional Economic Base

High Tech Manufacturing

Computer and peripheral equipment mfg.
Communications equipment manufacturing
Audio and video equipment manufacturing
Semiconductor and electronic component mfg.
Electronic instrument manufacturing
Magnetic media manufacturing and reproducing
Aerospace product and parts manufacturing
Pharmaceutical and medicine manufacturing

Diversified Manufacturing

Wood product manufacturing
Nonmetallic mineral product manufacturing
Primary metal manufacturing
Fabricated metal product manufacturing
Machinery manufacturing
Electrical equipment and appliance mfg.
Ship and boat building
Other transportation equipment manufacturing
Furniture and related product manufacturing
Miscellaneous manufacturing
Other food manufacturing
Beverage and tobacco product manufacturing
Textile mills
Textile product mills
Apparel manufacturing
Leather and allied product manufacturing
Paper manufacturing
Printing and related support activities
Petroleum and coal products manufacturing
Other chemical manufacturing
Plastics and rubber products manufacturing
Miscellaneous manufacturing

Wholesale Trade and Transportation

Merchant wholesalers, durable goods
Merchant wholesalers, nondurable goods
Air transportation
Rail transportation
Water transportation
Truck transportation
Transit and ground passenger Transportation
Pipeline transportation
Scenic and sightseeing transportation
Support activities for transportation
Couriers and messengers
Warehousing and storage

Basic Information Services

Publishing industries, except Internet
Software publishers
Broadcasting, except Internet
Internet publishing and broadcasting
Telecommunications
ISPs, search portals, and data processing
Other information services

Professional, Technical, Scientific and Management Services

Legal services
Accounting and bookkeeping services
Architectural and engineering services
Specialized design services
Computer systems design and related services
Management and technical consulting services
Scientific research and development services
Advertising and related services
Other professional and technical services
Management of companies and enterprises

Entertainment and Tourism

Motion picture and sound recording industries
Performing arts and spectator sports
Museums, historical sites, zoos, and parks
Amusements, gambling, and recreation
Accommodation

Basic Government

Department of Defense
Federal government exc defense
State education
State government exc education

Resource Based

Agriculture, forestry, fishing and hunting
Mining
Fruit and vegetable preserving and specialty

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